IN THE CLAIMS

Please amend claims 1, 6, and 8, as follows:

1   1 (four times amended). A memory system, comprising:

2   a plurality of defect-adaptive memory devices, each of said plurality of defect-

3   adaptive memory devices having a first region for sequentially storing

4   parity information for data recovery and a second region for storing data;

5   a plurality of caches, each of said plurality of caches respectively coupled

6   operatively to a corresponding unique one of said plurality of defect-

7   adaptive memory devices, each of said plurality of caches adapted for

8   storing parity information for data recovery for a corresponding unique

9   one of said plurality of defect-adaptive memory devices; and

10   a controller operatively coupled to each defect-adaptive memory device of said

11   plurality of defect-adaptive memory devices and to each corresponding

12   cache of said plurality of caches, said controller comprising a first means

13   for selectively controlling writing and reading of parity information

14   needed for data recovery in said first region of each corresponding one

15   of said plurality of defect-adaptive memory devices, a second means for

16   selectively obtaining parity information needed for data recovery from

17   said first region of each corresponding one of said plurality of defect-

18   adaptive memory devices, and a third means for selectively storing parity

19   information needed for data recovery obtained from said first region of

20   a corresponding one of said plurality of defect-adaptive memory devices

21   in a predetermined corresponding one of said plurality of caches.

1   6 (four times amended). A redundant array of inexpensive disks (RAID)

2   system, comprising:

3   a plurality of disk drives, each of said plurality of disk drives including a first

4   region having a plurality of data blocks for storing data and a second

5   region having a predetermined number of parity blocks for storing parity

6   information for data recovery;

7   a plurality of caches, each of said plurality of caches respectively coupled

8   operatively to a corresponding unique one of said plurality of disk drives,

9   each of said caches adapted for storing parity information for data

10   recovery; and

11   a controller operatively coupled to each disk drive of said plurality of disk

12   drives and to each corresponding cache of said plurality of caches, said

13   controller adapted for selectively controlling a write operation of data

14   and parity information for a data recovery in each corresponding disk

15   drive of said plurality of disk drives, said controller comprising:

16   a first means for selecting a single predetermined disk drive of

17   said plurality of disk drives upon receipt of a data writing

18   instruction from a host computer;

19   a second means for reading old data from the single

20 predetermined disk drive of said plurality of disk drives;

21 a third means for determining whether old parity information

22 corresponding to the old data corresponding to the single

23 predetermined disk drive of said plurality of disk drives is

24 accessed in a corresponding single cache of said plurality of

25 caches;

26 a fourth means for reading the old parity information from the

27 single predetermined disk drive of said plurality of disk

28 drives, upon the old parity information corresponding to the

29 single predetermined disk drive of said plurality of disk

30 drives not being accessed in the corresponding single cache

31 of said plurality of caches, and for then loading the

32 corresponding single cache of said plurality of caches with

33 the old parity information;

34 a fifth means for obtaining new parity information by performing

35 an exclusive OR operation on the old data, the old parity

36 information and new data;

37 a sixth means for loading the corresponding single cache of said

38 plurality of caches with the new parity information;

39 a seventh means for writing the new data in said region for storing

40 data in the single predetermined disk drive of said plurality

41 of disk drives and writing the new parity information in said

42   another region for storing parity information in the

43   predetermined <u>single</u> disk drive of said plurality of disk

44   drives; and

45   an eighth means for reading old parity information from the <u>single</u>

46   predetermined disk drive <u>after the seventh means has</u>

47   <u>written new data in said region for storing data and has</u>

48   <u>written the new parity information in said another region for</u>

49   <u>storing parity information</u>, in the event that no old parity

50   information exists in a corresponding cache, and for then

51   moving said old parity information read from the <u>single</u>

52   predetermined disk drive to the corresponding cache to

53   provide an update of the parity information.

1   8 (amended). The method of claim 7, wherein said step for reducing overhead

2 during a read operation for data recovery and thereby improving data input-output

3 performance comprises steps for:

4   (a) coupling each one of a plurality of caches to each corresponding <u>unique</u> one

5 of a plurality of disks, whereby each disk is coupled to one <u>unique</u> cache;

6   (b) operatively coupling the caches to the controller;

7   (c) storing in each <u>unique</u> one of the plurality of caches information for data

8 recovery in the <u>unique one</u> disk corresponding to the <u>unique one</u> cache; and

9   (d) determining information for data recovery in a disk by using information for

10   data recovery stored in the <u>unique one</u> cache corresponding to the <u>unique one</u> disk.